

2015 DOE SSL Market Development Workshop

Welcome

November 12, 2014

James R. Brodrick, Ph.D.

U.S. Department of Energy

Exciting Times in Detroit

THE WALL STREET JOURNAL. ≡ | U.S.

U.S. NEWS

Detroit Launches New Program to Repair Streetlights

Nearly Half City's 88,000 Lights Are Broken; New Authority Plans to Borrow Funds to Revamp System

DETROIT'S PREMIER BUSINESS JOURNAL
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Champions of the New Economy Powered by Women 3

DBusiness Daily News / Annual 2014 / New LED Street Light Installation Begins in Detroit

New LED Street Light Installation Begins in Detroit

BY IZZI BENDALL



Published: Wednesday, February 12, 2014

The first set of LED street lights — deemed brighter and more energy efficient — will be installed toda

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Detroit Street-Light Project Lets Life Go On After Dark

Detroit Free Press
A GANNETT COMPANY

HOME NEWS SPORTS AUTOS BUSINESS LIFE ENTERTAINMENT OPINION USA TODAY

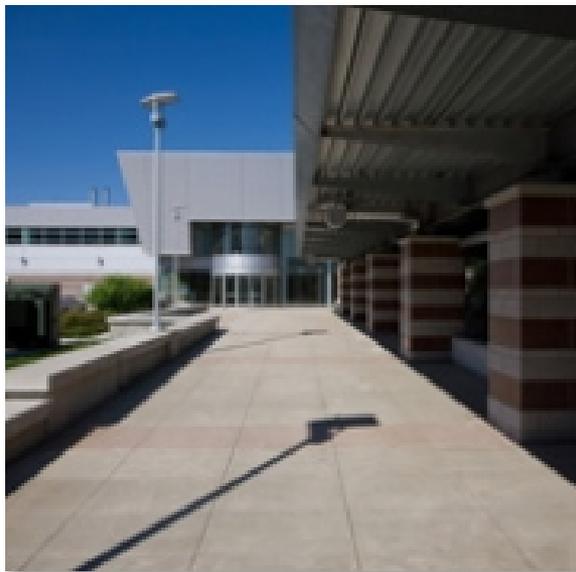
City's new streetlights pass 20,000 mark

LEDs in Action

Chrysler House: Three-floor office space experiment

- 14th floor: Baseline
- 15th floor: LED lighting
- 16th floor: LED lighting plus motion and daylighting controls

Building feeds real-time energy use info to dashboard



NextEnergy Center: LED demonstration site

- Outdoor lighting
- Indoor lighting with controls
- NextHome living laboratory

NextEnergy–Ford Lighting Innovation Challenge

- Technology innovation challenge to advance state-of-the-art automotive lighting
- Up to \$40,000 in prizes
- Launches November 19 at Michigan Advanced Lighting Conference in Lansing
- More info: www.nextenergy.org/malc

Challenges:

- *Featherweight*
- *Design for Manufacturing*
- *Daylighting LEDs*
- *Structural Lighting*
- *Lifecycle*



Ford Assembly Plants Convert to LED Lighting

- Ford invests \$25M to install LED lighting at manufacturing facilities across North America and worldwide
- 25,000 new LED fixtures will replace traditional HID and fluorescent lighting

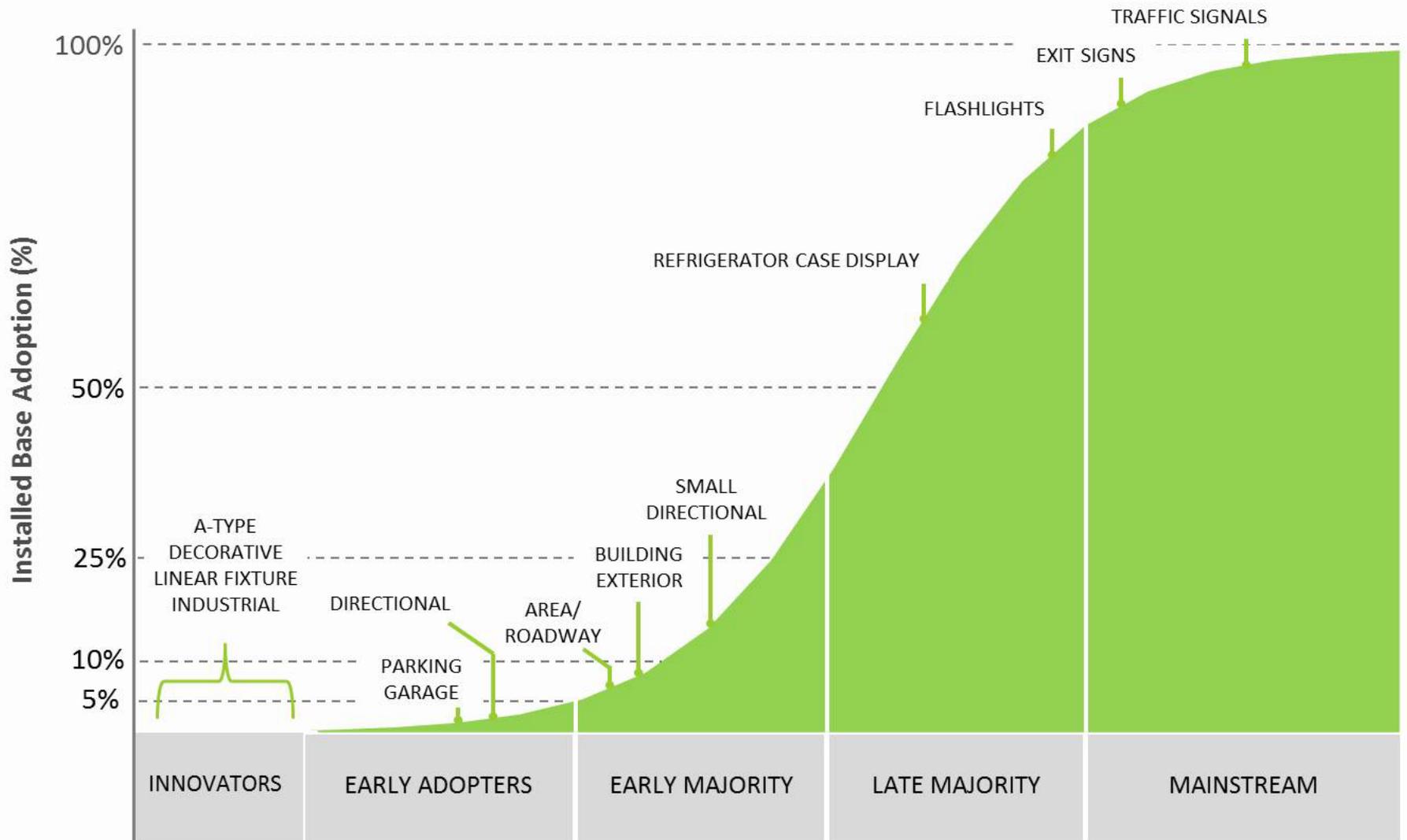


Dearborn plant will have new LED lighting for assembly of 2015 Ford F-150

Features LED headlights, side mirror lights, cargo bed lights

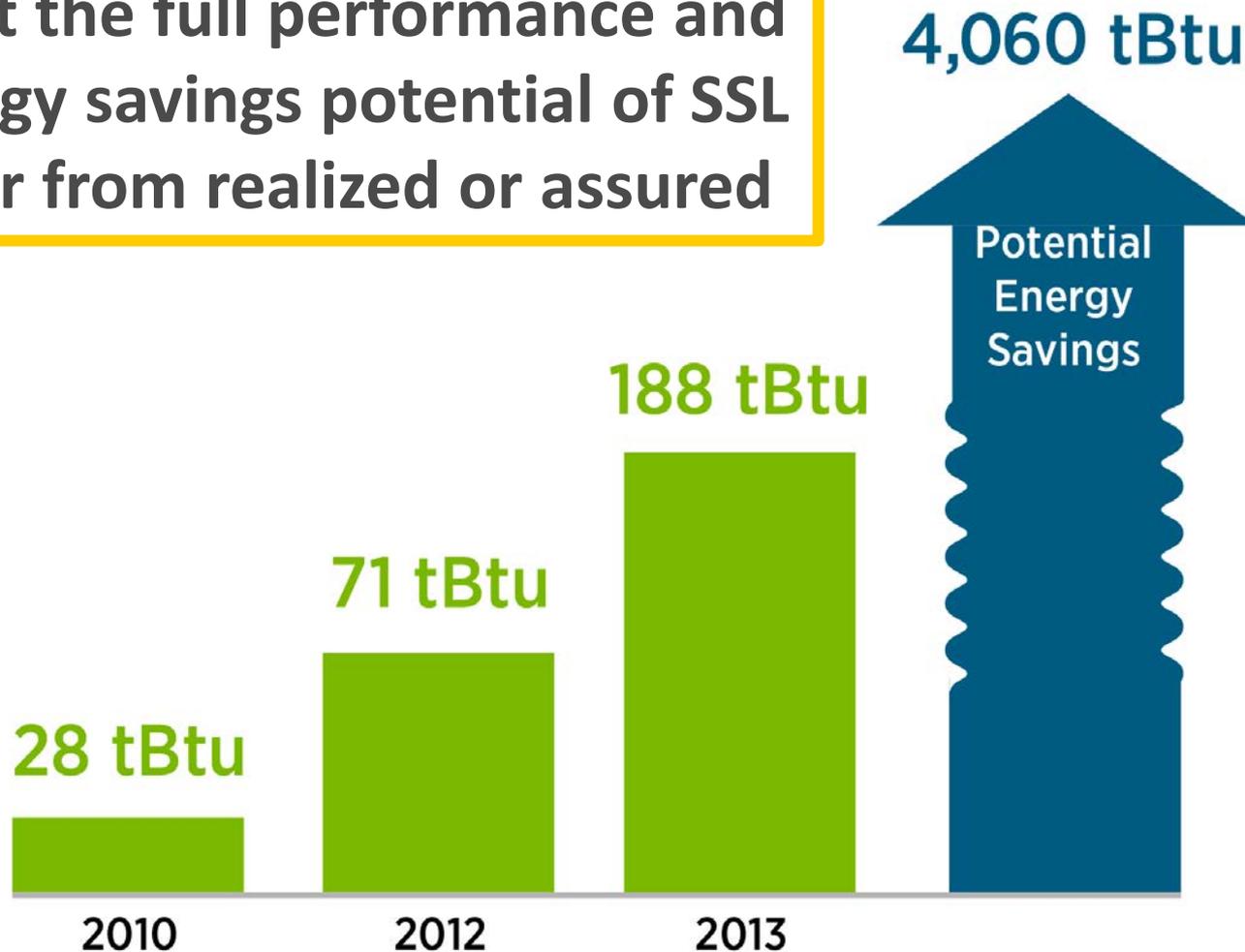


The Evolution of Adoption: It Takes Time



SSL Saving Energy Today

...but the full performance and energy savings potential of SSL is far from realized or assured



Lessons Learned from CFLs

- Early CFL products not ready for prime time: quality issues, too expensive, exaggerated claims
- Poor performing products damaged market, delayed acceptance for 15 years
- Lessons for LED lighting:
 - Technical failures/limitations: Admit and correct
 - Life claims: Back up with guarantees
 - Performance matters, pricing is critical



Lessons Learned from Early SSL Market

- Actions taken did result in smoother market entry
- BUT unique attributes of LED lighting present a host of new challenges impacting market adoption
- Technological challenges
- Infrastructure limitations
- Interoperability issues
- More on this from Kelly Gordon



Keeping Pace



What's Next?



The Unknown Unknowns

SECTIONS HOME SEARCH

The New York Times

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BUSINESS DAY

At Newark Airport, the Lights Are On, and They're Watching You

By DIANE CARDWELL FEB. 17, 2014



Visitors to Terminal B at [Newark Liberty International Airport](#) may notice the bright, clean lighting that now blankets the cavernous interior, courtesy of 171 recently installed LED fixtures. But they probably will not realize that the light fixtures are the backbone of a system that is watching them.

Using an array of sensors and eight video cameras around the terminal, the light fixtures are part of a new wireless network that collects and feeds data into software that can spot long lines, recognize license plates and even identify suspicious activity, sending alerts to the appropriate staff.

The project is still in its early stages, but executives with the [Port Authority of New York and New Jersey](#), which operates the airport, are already talking about expanding

This LED-based light fixture can gather and transmit data for automated analysis.
Peter DaSilva for The New York Times

There are things known
and there are things
unknown, and in
between are the doors
of perception.

– ALDOUS HUXLEY

